INSECTS OF MICRONESIA
Diptera: Omphralidae (Scenopinidae)[1]

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Omphralids are obviously poorly represented in Micronesia, where to date just one species has been taken. Many of the species of these flies are commonly collected only on windows, a type of habitat not usual in much of Micronesia. Three species are represented in the Hawaiian Islands, and only 13 species are known from the entire Oriental and Pacific Regions.

Little is known of the biology of the omphralids, the larvae of which are predaceous; the few species which have been studied live mainly in association with clothes moths, carpet beetles, and pests of stored products. It is obvious, however, that the non-domestic species prey upon a variety of different insects.

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The drawings were prepared by Marian S. Adachi, University of Hawaii.

Omphrale papuana Kröber (fig. 1).

Scenopinus niger Grimshaw (*nec* DeGeer), 1901, Fauna Hawaiiensis **3** (1): 11.

Omphrale papuana Kröber, 1912, Suppl. Ent. **1**: 25-26.

Omphrale nigra Swezey, 1946, B. P. Bishop Mus., Bull. **189**: 195. [Erroneous spelling for *Scenopinus niger* DeGeer (1776) was apparently emended to *nigra* by Meigen (1824, Syst. Beschreib. Zweifl. Insektun **4**: 116).]

Moderate-size, predominantly black species. *Head:* Antenna black, tinged with brown or reddish brown; third segment is about three and one-half times longer than wide and parallel-sided. Eyes of male very close together on upper half of front; eyes separated by a very narrow black line. Lower portion of front shining black in middle, gray pubescent on

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sides. In females front comparatively narrow, about four times longer than wide. (Kröber stated in the original that the front is broad, but I certainly would not consider it as such.) Front of female chiefly subshining black or brownish black, finely shagreened, with a shining black furrow extending entire length down middle and a polished black line down each eye margin. Face of both sexes predominantly gray pubescent with a small, polished gibbosity on each side at lower corner of eye. *Thorax:* Subshining black, finely shagreened, anterior portion gray pollinose on each side just inside humerus. Posterior lateral margins of mesonotum (postalar area) yellow to rufous. Halteres brown to black. *Legs:* Shining dark brown to black with yellow tarsi. Segments short and rather thick but not expanded. *Wings:* Smoky gray fumose, stigmata scarcely darker than wing membrane; first costal

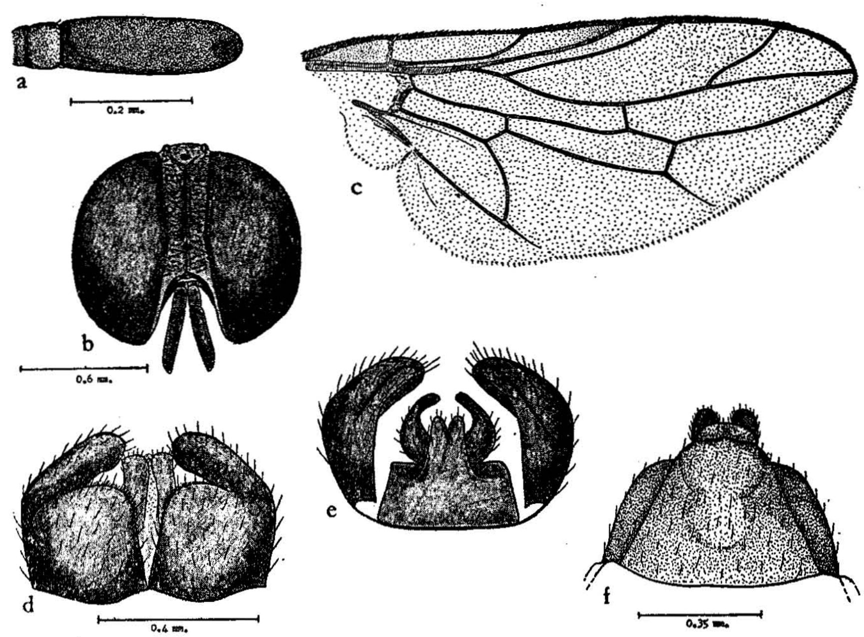


FIGURE 1.—*Omphrale papuana:* **a,** antenna; **b,** head of female; **c,** wing; **d,** male genitalia, ventral view; **e,** male genitalia, dorsal view; **f,** female genitalia, ventral view.

cell brown. Vein R_4 forking off before middle of vein from r-m cross vein to wing apex. In most species of *Omphrale,* this forking occurs beyond the middle of this section so that vein R_5 is considerably shorter than that portion of R_{4+5} from r-m to furcation. The r-m cross vein situated near apical two-thirds of cell 1st M_2. Veins M_{3+4} and Cu_1 + 1st A evanesce before reaching wing margin. *Abdomen:* Entirely subshining brown to black with no white transverse markings in either sex. Abdomen comparatively short and broad, in males nearly as wide as long; in females about one-half longer than wide. (In the original description Kröber said the abdomen of the female is 2.0 mm. wide; this is an error, since his type, and other specimens, measure not over 1.3 mm. in width.) *Genitalia:* In male ninth tergum completely divided into two plates which approximate each other on lower median margin of ventral aspect of genitalia. (The genitalia are completely turned in this genus so the ninth tergum, cerci, and anal region lie on the venter.) Lateral plates of tergum do not extend as far around dorsal portion as in most species studied and do not

obscure inner portions of genitalia. Each plate of tergum developed on dorsolateral portion into a pair of strong lobes. Claspers moderately well developed, thickened at bases, curved slightly inward and truncate at apices. Median portion of ninth sternum (dorsal view) rather slender, extending about half the length of claspers, with a V-shaped concavity in middle of hind margin. Directly below this sclerotized portion is a pair of short, curved, hook-like parameres next to aedeagus. In females ninth sternum has small pointed convexity in middle of hind margin. Inner surface (ventral) of sclerite directly below anal region (dorsal surface of egg channel) rather densely covered with short peglike setae. (This is the first description of the genitalia of this species; the males have never before been reported.)

Length: Body 3.2-4.0 mm. (Kröber recorded body length as 4.0-4.5 mm.); wing 2.7-3.5 mm.

DISTRIBUTION: Previously known only from Formosa (type; Kanshirei) and New Guinea. It is fairly common in the Hawaiian Islands (Oahu, Maui, and Hawaii), collected mostly on windows. It has been reared from an infestation of cigarette beetles (*Lasioderma serricorne* Fabricius) in Honolulu.

S. MARIANA IS. AGIGUAN: June 6, 1952, Kondo. GUAM: 1911, Fullaway; Piti, August 20, 1936, "on surface of water in water barrel," Swezey.

Four specimens were reported by Swezey (1946) from Guam: Three taken in 1911 and one in 1936. Since that time just one additional specimen has been collected (Agiguan Island, 1952). I have studied the specimens reported by Swezey. Aside from his Guam report, this species has also been confused in the Hawaiian literature under the name *Scenopinus niger* DeGeer. Actually *S. niger* is a very different European species. It is the genotype of *Archiscenopinus* Enderlein (1914), a group which is differentiated by the widely separated eyes of the male with all of the eye facets of equal size, and by the swollen, club-shaped hind tibiae of the male. Also, the wings of *Scenopinus niger* are distinctly brown fumose, not smoky gray, and the venation differs from that of *Omphrale papuana*. It is obvious that the misidentifications were based upon the fumose wings of both species and that no one bothered to make comparisons with specimens from Europe. I have compared specimens from the Hawaiian Islands with *Archiscenopinus niger* (both sexes) from Germany and Latvia and have had specimens from the Hawaiian Islands compared with the type of *Omphrale papuana* Kröber in the Deutsches Entomologisches Institut, Berlin, by Dr. W. Hennig. Furthermore, I studied Kröber's type while in Berlin in September 1954. Our species from the Hawaiian Islands and Micronesia is clearly the same as Kröber describes from Formosa and New Guinea.